Computer Science

Awarding Body: AQA

Level: A-Level

Introduction

If you enjoyed Computer Science at GCSE and feel you want to understand more or delve deeper into the evolving science of communication and the way in which technology functions; then A-Level Computer Science would be a great choice to support this exploration. The course is ideal for those who have studied Computer Science at GCSE and have discovered an interest that they want to explore to an A-Level standard. The course will provide an insight to the functionality of modern computer systems, whilst also providing you with the skills to problem solve, program a solution of your choice and provide a solid foundation into how computer systems have evolved and continue to change the modern world.

Year one content

In year one students will be introduced to a number of units that will allow students to further their understanding along with introductions to topics unseen before starting the course.

Topics that will be covered in this year will include:

- Problem Solving

- Programming Concepts

- Databases

- Theory of Computation

- Data Structures

- Communication and Networking

- Computer Systems

At the end of the first year you will be introduced to the personal project, which will contribute 20% to your overall grade.

Year two content

The units of study that will be covered as you progress into year two will be:

- Analysis of Existing Programs

- Modification of Existing Programs

- Big Data

- Data Representation

- Functional Programming

- Consequences of using Computers

- Computer Organisation and Architecture

You will also continue to refine your personal project. A hand-in date will be issued to students for moderation.

What you need

At least a grade 5 in GCSE Computer Science / Computing or a grade 5 in GCSE Maths.

Career and further study

Learners will be able to progress onto a number of courses beyond A-Level, even those not related to Computer Science that could include:

Engineering
Medicine
Computer Science
Software Engineering
Cyber Security
Apprenticeships
Sponsored Degrees

Trips and other costs

You are expected to purchase your own textbooks.